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Marine Casualty Investigations

Enquêtes sur les accidents maritimes

Investigation Report to the Minister pursuant to sections 542 or 545 of the Canada Shipping Act

Rapport d'investigation au Ministre conformément aux articles 542 ou 545 de la Loi sur la marine marchande du Canada

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INVESTIGATION REPORT INTO THE CIRCUMSTANCES SURROUNDING THE SINKING OF THE FISHING VESSEL "AMY IRENE" ON THE GRAND BANKS OF NEWFOUNDLAND, JUNE 2, 1986.

REPORT No. 456

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INVESTIGATION REPORT INTO THE CIRCUMSTANCES SURROUNDING THE SINKING OF THE FISHING VESSEL "AMY IRENE" ON THE GRAND BANKS OF NEWFOUNDLAND, JUNE 2, 1986.

Particulars of Vessel

Name	"AMY IRENE"
Official Number	803940
Port of Registry	Halifax, N.S.
Gross Tonnage	37.34
Net Tonnage	25.30
Length	12.56 m
Breadth	5.0 m
Depth	1.71 m
Draught Aft	1.52 m
Built	1983, Clark's Harbour, N.S.
Type	Longliner
Propulsion	One, 8 cylinder, 'Perkins 510M' diesel engine, driving a single fixed-pitch propeller capable of attaining 180 b.h.p. The engine was controlled from the wheelhouse.
Crew	5
Owner	Jewers Fishery Cooperative Limited Halifax County, Nova Scotia

Navigating Equipment

All navigating equipment which was reported to be on board and in good working condition.

Radar

Echo Sounder

Loran C

AM, SSB & VHF radios

Magnetic Compass

Autopilot

Description of Vessel

This was a relatively new Cape Islander fishing vessel built with a double fibreglass hull of 22 mm thickness on the outside and 16 mm thickness on the inside and with a 19 mm layer of fibrefoam sandwiched in between.

There was a fish hold subdivided into 12 compartments and a lazaret was located abaft the hold.

The vessel was issued a SIC 29 Steamship Inspection Certificate, Home Trade Class II, March 20, 1984, and this was valid for 4 years.

NOTE 1. All times mentioned in this report are expressed in Atlantic Daylight Saving Time (UTC minus 3 hours).

2. A Glossary of terms and abbreviations may be found following the Findings in this report.

Background

The "AMY IRENE" was returning to Marie Joseph, Nova Scotia, after fishing on the Grand Banks of Newfoundland. Shortly after 1800, June 2, 1986, the vessel settled by the stern and eventually, when in danger of sinking, the crew abandoned in a liferaft. They were subsequently rescued in position 45°10'43"N, 55°15'42"W after having spent some six hours in the liferaft.

The vessel had an insured value of $125,000. There were no injuries and no pollution was detected as a result of this incident.

Narrative

The fishing vessel "AMY IRENE" departed Marie Joseph, Nova Scotia, at 2100, May 27, 1986, for fishing grounds in the Laurentian Channel and on the Grand Banks of Newfoundland. On board was a crew of five.

A successful fishing venture was achieved during the ensuing four days with a catch of 20,400 kg of hake and 260 kg of halibut being taken. The vessel's maximum catch was considered to be in the order of 27,000 kg. There were about 2000 kg of ice remaining in the fish hold.

At approximately 0530, June 2, the skipper decided to return to port. At that time, the bilge system and the shaft cooling system were apparently checked out and no water was evident in the bilge, however, the pump was left running until approximately 1500. The fish hold and lazaret were then covered with their respective wooden hatchboards over which fibreglass covers were positioned and secured with pins. The pins were then lashed together with rope to prevent them from being unshipped. It was considered that these deck openings, although not watertight, were weather-tight. At approximately 1000, all was secured on board.

A course of 290° magnetic was set, the steering was put in the automatic mode and the vessel's speed over the ground was some 5½ knots. The skipper remained in the wheel-house until 1500 when he was relieved by deck-hands so that he could rest before darkness.

The weather pattern had remained the same throughout the day and would continue so into the night. The wind was out of the south-west at about 20-25 knots with a sea of about 2 m. Persistent fog limited the visibility to no more than 5 cables.

When the skipper went below deck, everything appeared to be normal and the vessel was steady. The deck-hands then alternated each hour in the wheel-house. The radar was operating as were the echo sounder, the Loran C and all the radios.

At 1810, the skipper awakened and suspected that something was amiss. He went directly to the wheel-house and learned that the autopilot had failed. The breakers were reset but this action was ineffective as the vessel continued a swing to port. The door to the wheel-house was now opened and, when the skipper looked aft, the deck was awash and seas were being shipped on the afterdeck. The steering was reverted to hand mode and with the engine at full speed, the vessel was steadied up into the sea as efforts were made to jettison the trawl tubs.

By this time, all hands were on deck and, whilst two men cleared away the liferaft and the dory, two others were attempting to jettison the trawl gear which originally had been stowed and lashed on the deck above the lazaret and was

now afloat.

The bilge pump was restarted but evidently this action was too late. When it became apparent that the engine power was insufficient to hold the vessel's head into the wind/seas, the jettisoning was abandoned and the engines stopped.

At approximately 1840, the skipper broadcast a 'MAYDAY' on MF on 2182 kHz, and on VHF channels 16 and 6 and, as there was no response, he further broadcast on MF on 2638 kHz. This particular call and the Loran C co-ordinates were received by the fishing vessel "JESSIE AND SHELLEY" which was then 120 miles from the incident area. Upon receipt of the nature of the distress and the position, the "JESSIE AND SHELLEY" advised CGRS St. Lawrence (VCP). A 'MAYDAY' relay was broadcast by this station and responded to by the fishing vessels "ZURICH", "LA GOULETTE", "BRATENE" and "CROIX DE LORRAINE", DFO Research vessel "WILFRED TEMPLEMAN", CCGS "BARTLETT" and M.V. "ARCTIC PROWLER". In addition, Buffalo aircraft 'R-455' was dispatched from Summerside, Prince Edward Island.

Meanwhile, on board the "AMY IRENE", following the 'MAYDAY' transmissions, the liferaft was successfully launched. All hands, wearing lifejackets, abandoned the vessel at approximately 1850 and boarded the liferaft which was secured to the now semi-submerged vessel. The weather conditions were as they had previously been with the visibility fluctuating between zero and 5 cables.

The skipper decided to keep the liferaft secured to the forward rail of the sinking vessel as long as practicable in order to afford a more solid radar target for search vessels.

The "LA GOULETTE" was 18 miles away from the "AMY IRENE" when she heard the 'MAYDAY' relay at 1919. Her skipper immediately headed for the co-ordinates given and at 2027 reported a radar target at 4 miles. At 2111, the same fishing vessel sighted a light and proceeded to investigate.

The five survivors were seen in their liferaft still secured to the "AMY IRENE". At this point, an apparent language barrier developed although the skipper of the "AMY IRENE" apparently understood that the skipper of "LA GOULETTE" wanted him to let go the liferaft from the "AMY IRENE" and drift downwind towards "LA GOULETTE". However, the skipper of the "AMY IRENE" was averse to doing this as the visibility was so minimal. He was afraid that, should they miss connecting with the "LA GOULETTE", they may

become lost in the fog. The "LA GOULETTE" then stood off at about one mile to offer herself as a target for further rescue vessels. At 2125, 'R-455' arrived in the vicinity and it was shortly after this that the line from the liferaft to the "AMY IRENE" was severed because the latter was now submerged and going down.

At 2246, the "CROIX DE LORRAINE" arrived in the area and, one hour later, this vessel reported that all five survivors had been taken aboard and were in good health.

CCGS "BARTLETT" which had arrived in the area at 0540, had intended to take the survivors aboard her and proceed to St. John's, Newfoundland. Unfortunately, the existing weather conditions were not favourable for such a transfer and, as these conditions persisted, at 1340 it was decided that the "CROIX DE LORRAINE" would transport the survivors to St. Pierre, estimating an arrival time of 1100, June 4. The survivors were landed at St. Pierre at 1121, June 4, 1986, after having been well treated and cared for by the crew of the "CROIX DE LORRAINE". The "AMY IRENE" sank in approximate position latitude 45°10'30"N, longitude 55°15'53"W.

Analysis

1. The Vessel

According to members of the fishing community, the "AMY IRENE" was built to above average standards. Evidently, the owner had spent a considerable amount of time and money in finishing the hull and superstructure to a standard beyond specification requirements.

It was reported that during trials, winds in excess of 60 knots and accompanying rough seas were encountered but the vessel behaved and responded admirably.

The fish hold was divided into 12 compartments with three fore and aft and two athwartship portable bulkheads. The bulkhead between the lazaret and the fish hold had a drain hole 5 cm x 10 cm cut through at a height above the floor of some 10 cm. There was a series of drain holes equally spaced along the floor of the fish hold for draining into the bilge space below.

As the forward and after engine-room bulkheads were watertight, the "AMY IRENE" complied with section 24 of the Small Fishing Vessel Inspection Regulations respecting watertight bulkheads. Further, as the vessel was already provided with 2 watertight bulkheads, the bulkhead between the lazaret and the fish hold was not

required to be watertight and consequently, in accordance with section 9(7) of the aforementioned regulations, a drain hole was cut through this bulkhead. (For excerpts of Regulations see Annex I)

One bilge pump with a capacity of 1.5 L/s was powered off the main engine and had one bilge suction each to the forward accommodation area, engine-room and the fish hold. This conforms with the bilge pumping requirements for small fishing vessel (See Annex I). The vessel also carried a portable gasoline powered pump of capacity 3 L/s.

A single bilge suction located in the bilge space below the fish hold was approximately 1 m abaft the forward bulkhead of the fish hold; this would indicate that there was a 3.3 m length of the bilge space aft of the suction. Hence, under normal operating conditions with the vessel trimmed by the stern, it would not be possible to pump out the water accumulated in this large area aft of the suction. (See Annex I and diagram.)

Two 450 L diesel oil tanks were located on the port and starboard floors of the lazaret but these were reportedly empty at the time of the incident.

A through-hull shaft cooling system was located at the after stern tube fitting. This consisted of a bronze intake with a 25 mm bronze nipple on which was threaded a bronze valve. One end of the bronze valve was connected to a 30-35 cm length of hydraulic hose secured by a stainless steel screw clamp and the other end was similarly clamped to a 25 mm galvanized steel nipple threaded into the stern gland which was constructed of bronze.

During the return voyage, there were 30 trawl tubs, each 60 cm square and 45 cm in depth, stowed on top of the lazaret.

The vessel was equipped with a four-person inflatable liferaft, last inspected in 1985, a wooden dory of dimensions 4.6 m x 1.5 m x 0.75 m, six lifejackets, one lifebuoy with a line and one with an approved lifebuoy light. The vessel therefore complied with the life-saving equipment requirements of the Small Fishing Vessel Inspection Regulations.

It should be noted that, since the vessel carried a dory capable of carrying 4 persons, the liferaft was only required to accommodate 75% of the crew. (See

Annex IV).

The sensor for the automatic steering control was located on the tiller arm. It would appear that, when the inside water level made contact with the sensor, it shorted the circuit, thereby rendering the automatic steering system ineffective. Once the system is inoperable but still in the automatic pilot mode, a situation of no resistance is created and the rudder would tend to flop over to one side or the other. In this instance, it went to port.

2. Weather

The marine synopsis for the Newfoundland area, issued at 1930, June 2, 1986, read:

> A southwest-northeast oriented trough of low pressure through central Newfoundland this evening will drift southeastwards and lie over the Grand Banks Tuesday evening.
>
> Moderate to strong winds are forecast over all waters except in the vicinity of the trough where winds are light.
>
> Marine area forecasts.
>
> ... southwestern Grand Banks.
>
> Southerly winds 20 to 30 knots shifting to westerly 15-20 near midday Tuesday. Visibility poor in showers and fog improving to good late Tuesday ...
>
> ... Banquereau (at 2030)
> Winds southerly 15-20 knots veering to northwest 15 to 25 overnight. Winds northwest 15 to 25 Tuesday. Extensive fog with showers and isolated thundershowers ending Tuesday morning. Clearing Tuesday afternoon. Visibility near zero in fog and 3 to 6 in precipitation. Temperatures lowering to 4 to 8 tonight ....

The weather at the time of the abandonment, in general, agreed with the forecast, and was as follows: winds SW 20-25 knots, sea 2 m and persistent fog with a visibility of less than 5 cables.

3. **The Sinking**

When the vessel left the fishing grounds, she had a reported afterdeck freeboard of some 60 cm and was 'steady' in the seaway. As each crewmember took over the bridge watch on the hour, he went first to the afterdeck to take a bottle of 'soft drink' from one of the 30 trawl tubs stowed on top of the lazaret. He then returned to the wheel-house and closed the door. There was reportedly no water on deck on these occasions.

If there was a slow ingress of water at the after end, it is somewhat unusual that no one noticed the stern settling as they went aft before going to the wheel-house, particularly the crewmember who went on watch at 1800.

It seems that all crewmembers who were sleeping at 1800 awakened at more or less the same time when the auto-pilot failed. This could have been due to the vessel's motion as she swung uncontrollably to port. No one could recall having felt anything which indicated that the vessel may have struck an object and from all reports of those who knew the vessel, it would have had to have been a heavy blow in order to have holed the hull.

The fact that the crew had been fishing continuously for nearly four days would have induced tiredness and it is conceivable that they did not notice any change in trim or freeboard. Yet, when the skipper looked aft after being summoned, the afterdeck was almost awash.

It is known that there was no water in the engine-room or accommodation but it was not possible in the time, nor with the condition of the vessel, for the crew to have checked the lazaret or fish hold.

If the vessel was deep enough by the stern to immerse the rudder gland and if the packing in the gland became loose, then possible ingress would occur.

If the shaft cooling system or the seacock assembly had fractured, then ingress would occur, but would not necessarily be evident in the engine-room.

As the autopilot failed - having its sensing unit in the rudderhead - there being no water in the engine-room and the vessel was becoming 'stern-heavy', it can be reasonably assumed that the ingress of water was in the lazaret; with increasing amounts of water on deck and,

with the drain hole in the forward lazaret bulkhead just 10 cm above the floor, the water would gradually have found its way into the hold. However, this is only a hypothesis. The "AMY IRENE" was, by all accounts, a well constructed and solid vessel which had weathered 60 knot winds and accompanying seas with no adverse effects.

The only problem 'of consequence' previously experienced by the vessel was the disintegration of the through-hull fitting to the galley sink drain. This was attributed to electrolysis and corrected by using heavy plastic pipe fittings. These repairs were not brought to the attention of Ship Safety, but would probably have been approved since the fittings were in an accommodation area and clear of the engine-room. The shaft cooling system, however, was of the original materials which were similar to those initially used in the galley sink drain.

Investigations revealed that the use of dissimilar metals has been the practice during the construction of fishing vessels at particular boatyards; not only with the shaft cooling systems but also with seacocks and galley sink unit discharges. Various incidents have come to light where electrolytic corrosion had occurred but had been discovered under circumstances that permitted repairs to be made, thereby averting more serious consequences.

When two dissimilar metals are submerged in salt water, an electric current will flow from the electro-positive or corroded metal towards the electro-negative or protected metal. The amount of corrosion or electrolytic action thus caused depends on the relative positions of the metals in a galvanic series and on the exposed areas of the two metals. The further apart the metals are in the series, the more rapidly one will corrode while the other remains unchanged or even more protected.

Galvanized steel and bronze have a wide variance in the series and the galvanized steel would, therefore, corrode readily.

The electrolytic action mentioned previously in connection with the galley sink drain was internal to the hull. As a defence against external hull electrolysis, sacrificial plates such as zinc can be attached to the underwater components of a vessel in areas where electrolysis is likely to occur.

The sacrificial plates or anodes are then eaten away instead of the next anodic metal (in this case, galvanized steel) in the area. There were seven such anodes fitted to the vessel, one internally and six externally. Their disposition was as follows:

- one was placed internally, close to the propeller shaft;
- two were on the hull adjacent to the propeller;
- two were on the rudder; and
- two were attached to the hull adjacent to the main engine cooling water sea suction.

These anodes were fitted 6 months prior to the casualty and were part of a regular 6-month replacement program maintained by the owner. The owner also made regular underwater inspections of the vessel's hull every two months using his own diving equipment. On his last inspection, approximately 2 months prior to the casualty, he found the anodes to be in a slightly eroded condition.

4. The Abandonment

The only uncertainty encountered during the abandonment was that experienced by the deck-hand trying to inflate the liferaft. Evidently he was not aware of the length of the securing painter which is jerked to inflate the liferaft. When he threw the liferaft overboard, he anticipated it inflating upon impact but then realized that the painter was still slack. He took hold of it and kept pulling until the liferaft finally did inflate. At this point, he drew in on the line and re-secured it on a shortened lead. The vessel was not carrying immersion suits.

All hands, wearing lifejackets, boarded from deck level by jumping, feet first, directly into the liferaft. No one was injured (from this method) and no one fell into the water. The only apparent discomfort was that from overcrowding i.e. five men in a four-person liferaft. Although the dory was prepared for an eventual abandonment, it was not used.

The decision was made to remain with the "AMY IRENE" as long as possible so that a stronger radar target would be offered to the rescue craft. This proved to be effective for the first vessel on the scene. However,

shortly after 2100, it became apparent that the vessel was sinking (below sea-level) and the line was severed. By this time, the "LA GOULETTE" was presenting herself as a radar target to other vessels. Morale was maintained by adopting a positive attitude and by reminiscing. Only one crewmember suffered discomfort when his feet became numb with the cold and accumulated water in the liferaft. The skipper rubbed this deck-hand's feet to maintain blood flow. All but this one crewmember climbed the Jacob's ladder of the "CROIX DE LORRAINE" and then the last crewmember who was hanging on to the ladder was hauled aboard the vessel with the ladder. The survivors were laudatory of the treatment received from the crew of the "CROIX DE LORRAINE".

5. The Rescue

The 'MAYDAY' was transmitted from the "AMY IRENE" when she was approximately 103 miles from the nearest land. The broadcast was initially made on 2182 kHz and VHF channels 16 and 6. When there was no response on any of those frequencies, the skipper switched to 2638 kHz. The "JESSIE AND SHELLEY", which was 120 miles to the south of "AMY IRENE", picked up the signal and, after both vessels reverted to 2182 kHz, she received the Loran C co-ordinates and the fact that the "AMY IRENE" was sinking by the stern. This information was passed along to CGRS St. Lawrence (VCP) by the "JESSIE AND SHELLEY" which was some 200 miles distant. There is no explanation as to why the initial transmission on 2182 kHz from the "AMY IRENE" was not received by VCP. Attempts were then made by VCP to communicate with the "AMY IRENE" but there was no reply. The "ZURICH" overheard the conversation between the "JESSIE AND SHELLEY" and VCP and, as she was 39.5 miles from the reported casualty position, she diverted towards the distressed vessel at 1837. RCC Halifax were advised at 1845 and the DFO research vessel "WILFRED TEMPLEMAN" was tasked. Buffalo aircraft 'R-455' was tasked from Summerside, Prince Edward Island, at 1853 and was en route at 1945. At 1907, CCGS "BARTLETT", which was 20 miles east of St. Pierre and 110 miles from the casualty, was tasked and proceeded at 11.5 knots. The "ARCTIC PROWLER" was tasked at 1912, the "LA GOULETTE" and the "CROIX DE LORRAINE" at 1919 and the "BRATENE" at 1929. The "LA GOULETTE" was only 18 miles from the casualty and, at approximately 2000, she observed a target on her PPI at 4 miles. She arrived on scene at 2032 and reported seeing a small light. This was a flashlight held by a survivor in the liferaft. 'R-455' arrived on scene at 2145 and apparently controlled

communications. It appears that there was a language difficulty between the crew of the "LA GOULETTE" and the survivors but the skipper of the "AMY IRENE" understood that he was being asked to cast-off from the sinking vessel and drift down towards the "LA GOULETTE" which was lying off to leeward of the liferaft. However, the skipper from "AMY IRENE" was concerned about missing the "LA GOULETTE" and becoming lost in the fog so he decided to await a more favourable rescue situation. It was just a short time after this that the "AMY IRENE" finally sank and it became necessary to sever the painter. By this time, the "LA GOULETTE" had disappeared in the fog and there was no method of communication. 'R-455' was released by RCC at 2240 and the aircraft returned to the base.

The "CROIX DE LORRAINE" arrived in the area at 2246 using the radar echo of the "LA GOULETTE" as a guide for the approach to the area. The liferaft was eventually located at about 2330 and all five crewmembers were successfully transferred to the "CROIX DE LORRAINE". The liferaft was recovered some days later and taken to St. John's, Newfoundland. The dory has not been found.

All vessels other than the rescue vessel, the Coast Guard vessel and DFO vessel were stood down at 0011, June 3, and the DFO vessel was released at 0540.

The CCGS "BARTLETT" reduced speed to make a 0600 rendezvous with the "CROIX DE LORRAINE" with the intention of taking the survivors off the fishing vessel and to St. John's. However, at 0658, the "BARTLETT" advised RCC that the weather conditions were unfavourable for a transfer at that time. At 1330, a decision was made to leave the survivors on board the "CROIX DE LORRAINE" and to land them at St. Pierre. The "BARTLETT" was released by RCC but remained in the area until 1530. No target was seen on the radar and at 1420, when visibility increased to 5 or 6 miles, no visual sighting was made and it was presumed that the "AMY IRENE" had sunk in approximately 90 fathoms of water.

6. Regulatory

Prior to the casualty, the vessel was underway in restricted visibility, less than ½ mile, which, by regulations, would require the posting of a lookout and the sounding of the whistle. (See Annex II and Annex III). Neither of these requirements were met but were not contributory to the casualty.

There is no evidence to indicate that there was any defect in machinery which may have contributed to the casualty.

7. **Personnel**

The skipper is uncertificated and is not required to hold a certificate by Regulations. He completed a course in Marine Emergency Duties (MED I) in 1982 and holds a Restricted Radiotelephone Operator's certificate issued in 1982. He has been fishing for 20 years including 13 years as skipper and 3 years with the "AMY IRENE". This was his fourth venture to the Grand Banks/Laurentian Channel area.

Findings

The "AMY IRENE" sank due to unknown causes.

It would appear that:

- there was ingress of water below the waterline at an unknown point of entry;
- several owners of fishing vessels of similar construction and with like components have reported electrolysis in their through-hull fittings below waterline; and
- the abandonment and subsequent rescue were conducted without mishap.

Other findings

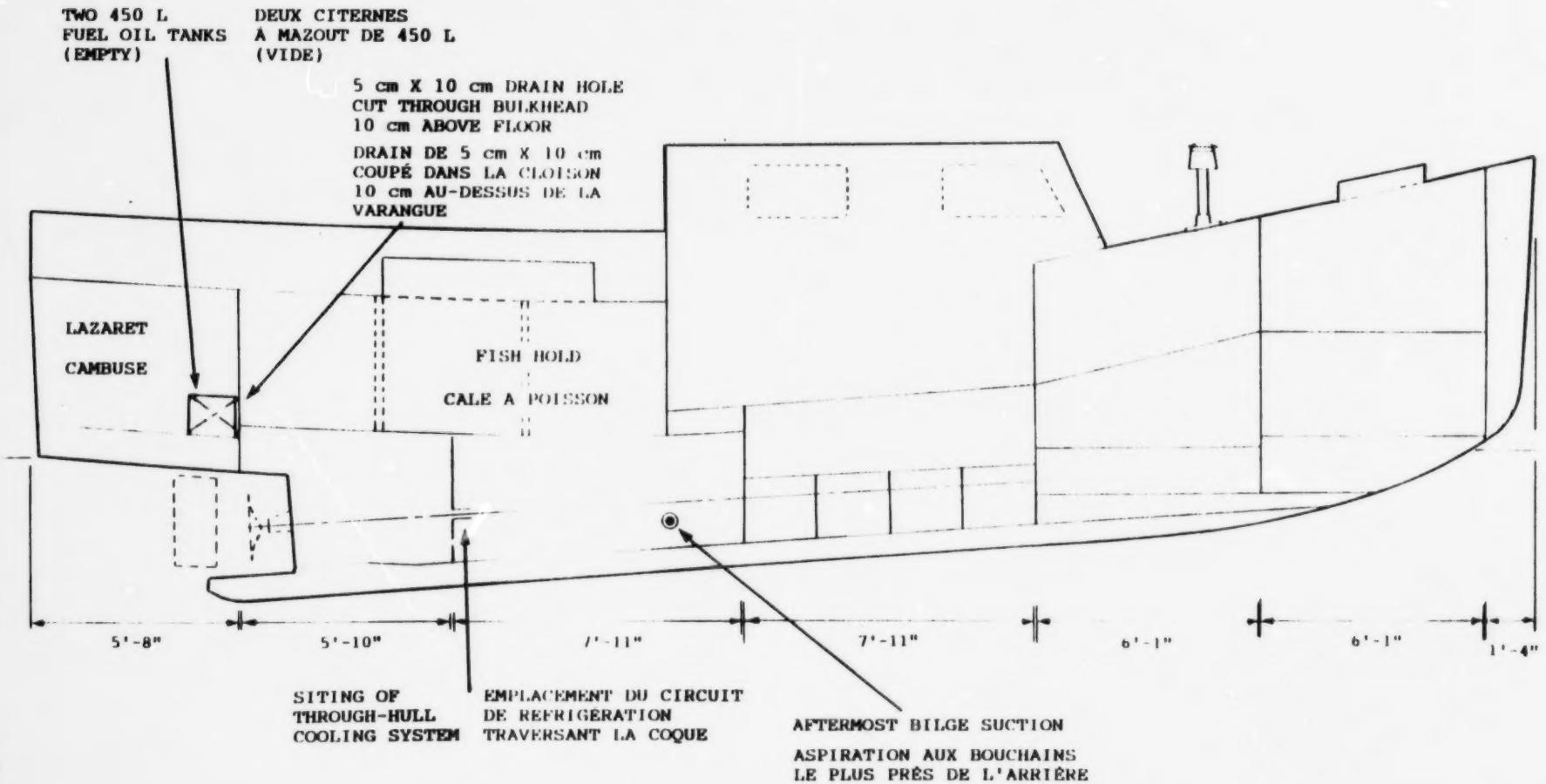
It would appear that the skipper, in operating his vessel in restricted visibility, of less than ½ mile, contravened Rules 1(a), 2(a), 5 and 35(a) of the Collision Regulations (1983) and paragraph 23 of the Recommended Code of Nautical Procedures and Practices (1985).

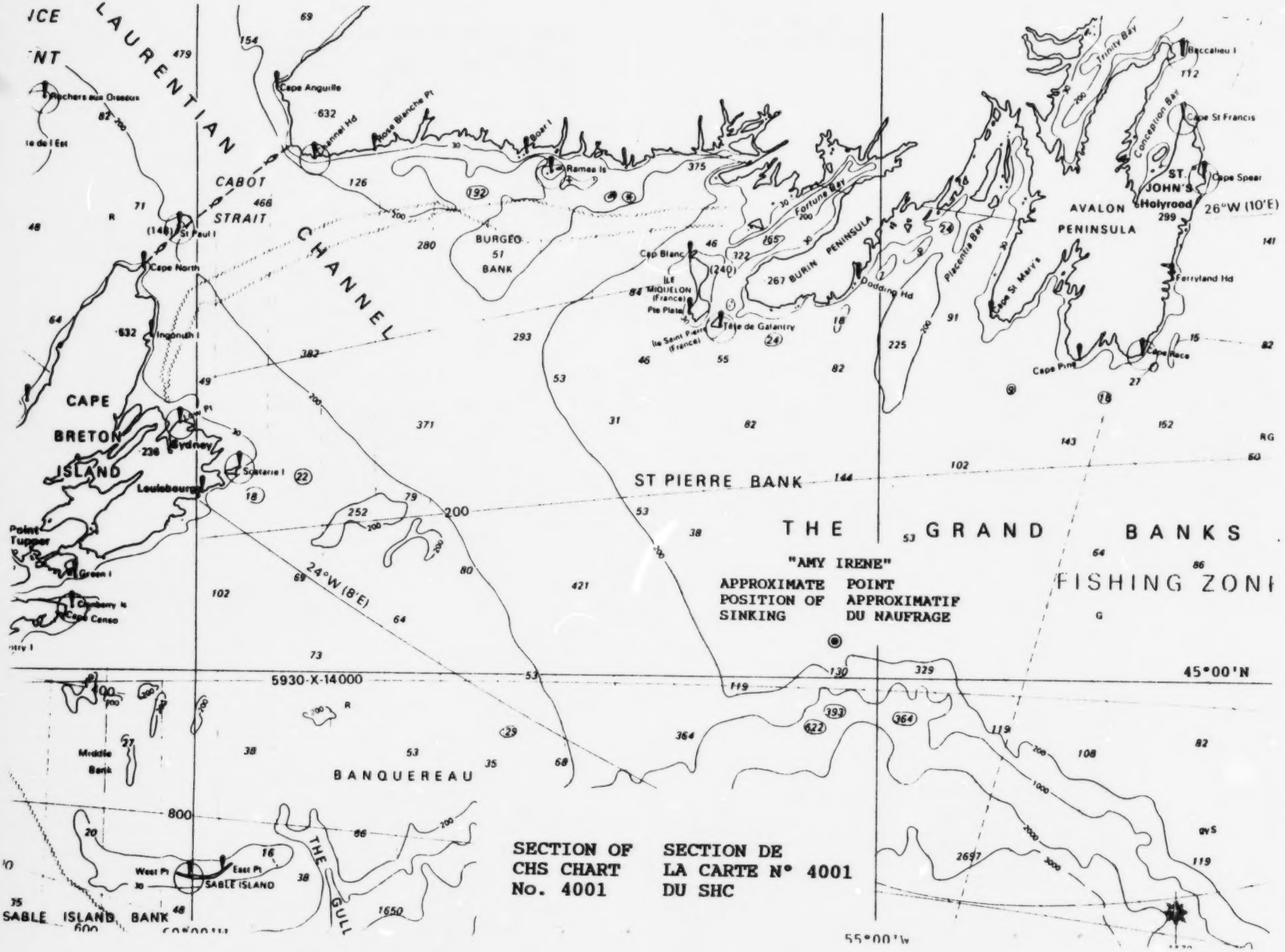
OTTAWA, ONTARIO
DÉCEMBER, 1986.

Glossary

CGRS	Coast Guard Radio Station
CCGS	Canadian Coast Guard Ship
DFO	Department of Fisheries and Oceans
Fathom	A nautical measure equal to 6 feet, 1.83 m.
Freeboard	The vertical distance measured on the vessel's side (amidships) from the load water line to the upper side of the freeboard deck.
kHz	kilohertz
'MAYDAY'	International radio distress signal used by ships calling for help. (m'aider)
MF	Medium frequency radio
'MAYDAY' relay	A distress message repeated by a station other than the station in distress.
PPI	Plan Position Indicator, the display unit of a marine radar set.
RCC	Rescue Co-ordination Centre
Seacock	A valve on a through-hull fitting used to supply water to fire pumps, sanitary pumps and ballast tanks.
SSB	Single side band radio.
Trim	The difference between the forward and after draughts.
UTC	Co-ordinated Universal Time
VHF	Very high frequency radio.

"AMY IRENE"


TWO 450 L
FUEL OIL TANKS
(EMPTY)
DEUX CITERNES
À MAZOUT DE 450 L
(VIDE)
5 cm X 10 cm DRAIN HOLE
CUT THROUGH BULKHEAD
10 cm ABOVE FLOOR
DRAIN DE 5 cm X 10 cm
COUPÉ DANS LA CLOISON
10 cm AU-DESSUS DE LA
VARANGUE
LAZARET
CAMBUSE
FISH HOLD
CALE A POISSON
5'-8"
5'-10"
7'-11"
7'-11"
6'-1"
6'-1"
1'-4"
SITING OF
THROUGH-HULL
COOLING SYSTEM
EMPLACEMENT DU CIRCUIT
DE REFRIGERATION
TRAVERSANT LA COQUE
AFTERMOST BILGE SUCTION
ASPIRATION AUX BOUCHAINS
LE PLUS PRÈS DE L'ARRIÈRE



SECTION OF CHS CHART No. 4001

SECTION DE LA CARTE N° 4001 DU SHC

ANNEX I

CHAPTER 1486

CANADA SHIPPING ACT

Small Fishing Vessel Inspection Regulations

REGULATIONS RESPECTING THE CONSTRUCTION AND INSPECTION OF FISHING VESSELS NOT EXCEEDING 24.4 m REGISTERED LENGTH THAT DO NOT EXCEED 150 TONS, GROSS TONNAGE

Short Title

1. These Regulations may be cited as the *Small Fishing Vessel Inspection Regulations*.

Bilge Pumping Arrangements

9. (1) Every fishing vessel not exceeding 15.2 m in length shall be provided with one bilge power or hand pump having a capacity of not less than 1.14 L/s.

(7) Bilge suctions and means for drainage on a fishing vessel that is divided into watertight compartments shall be so arranged that any water that enters any main watertight compartment can be pumped out, through at least one bilge suction situated in that compartment, and all compartments within each main division shall be arranged to drain to that bilge suction.

APPENDICE I

CHAPITRE 1486

LOI SUR LA MARINE MARCHANDE DU CANADA

Règlement sur l'inspection des petits bateaux de pêche

RÈGLEMENT CONCERNANT LA CONSTRUCTION ET L'INSPECTION DES BATEAUX DE PÊCHE D'UNE LONGUEUR RÉGLEMENTAIRE D'AU PLUS 24,4 m ET D'UNE JAUGE BRUTE D'AU PLUS 150 TONNEAUX

Titre abrégé

1. Le présent règlement peut être cité sous le titre: *Règlement sur l'inspection des petits bateaux de pêche*.

Installations d'épuisement de cale

9. (1) Tout bateau de pêche long d'au plus 15,2 m aura une pompe de cale, mécanique ou à bras, d'un débit d'au moins 1,14 L/s.

(7) Les bouches d'aspiration de cale et les dispositifs d'assèchement sur un bateau de pêche divisé en compartiments étanches seront disposés de telle sorte que l'eau qui pourrait pénétrer dans un compartiment étanche principal puisse être rejetée à l'extérieur par au moins une bouche d'aspiration, située dans ce compartiment, et tous les compartiments compris dans chaque division principale seront disposés de façon que l'eau puisse s'écouler vers cette bouche d'aspiration.

ANNEX II

REGULATIONS FOR THE PREVENTION OF COLLISIONS

Short Title

1. These Regulations may be cited as the *Collision Regulations*.

SCHEDULE I

(s. 2)

INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA, 1972 WITH CANADIAN MODIFICATIONS

PART A—GENERAL

RULE 1

Application—International

(*a*) These Rules shall apply to all vessels upon the high seas and in all waters connected therewith navigable by seagoing vessels.

RULE 2

Responsibility

(*a*) Nothing in these Rules shall exonerate any vessel, or the owner, master or crew thereof, from the consequences of any neglect to comply with these Rules or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

RULE 5

Look-out

Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

RULE 35

Sound Signals in Restricted Visibility—International

In or near an area of restricted visibility, whether by day or night, the signals prescribed in this Rule shall be used as follows:

(*a*) A power-driven vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.

APPENDICE II

RÈGLEMENT POUR PRÉVENIR LES ABORDAGES

Titre abrégé

1. Le présent règlement peut être cité sous le titre: *Règlement sur les abordages*.

ANNEXE I

(art. 2)

RÈGLEMENT INTERNATIONAL DE 1972 POUR PRÉVENIR LES ABORDAGES EN MER, AVEC MODIFICATIONS CANADIENNES

PARTIE A—GÉNÉRALITÉS

RÈGLE 1

Application—International

a) Les présentes règles s'appliquent à tous les navires en haute mer et dans toutes les eaux attenantes accessibles aux navires de mer.

RÈGLE 2

Responsabilité

a) Aucune disposition des présentes règles ne saurait exonérer soit un navire, soit son propriétaire, son capitaine ou son équipage des conséquences d'une négligence quelconque quant à l'application des présentes règles ou quant à toute précaution que commandent l'expérience ordinaire du marin ou les circonstances particulières dans lesquelles se trouve le navire.

RÈGLE 5

Veille

Tout navire doit en permanence assurer une veille visuelle et auditive appropriée, en utilisant également tous les moyens disponibles qui sont adaptés aux circonstances et conditions existantes, de manière à permettre une pleine appréciation de la situation et du risque d'abordage.

RÈGLE 35

Signaux sonores par visibilité réduite—International

Tant de jour que de nuit, à l'intérieur ou à proximité d'une zone où la visibilité est réduite, les signaux prescrits par la présente règle doivent être utilisés comme suit:

a) Un navire à propulsion mécanique ayant de l'erre doit faire entendre un son prolongé à des intervalles ne dépassant pas 2 minutes.

ANNEX III

- RECOMMENDED -

CODE OF NAUTICAL

PROCEDURES AND PRACTICES

1985

PART II

RECOMMENDATION ON OPERATIONAL GUIDANCE FOR OFFICERS IN CHARGE OF A NAVIGATIONAL WATCH

RESTRICTED VISIBILITY

23. When restricted visibility is encountered or expected, the first responsibility of the officer of the watch is to comply with the relevant rules of the applicable regulations for preventing collisions at sea, with particular regard to the sounding of fog signals, proceeding at a safe speed and having the engines ready for immediate manoeuvres. In addition, he should:
    (a) inform the master (see paragraph 24);
    (b) post a proper look-out and helmsman and, in congested waters, revert to hand steering immediately;
    (c) exhibit navigation lights;
    (d) operate and use the radar.

    It is important that the officer of the watch should know the handling characteristics of his ship, including its stopping distance, and should appreciate that other ships may have different handling characteristics.

APPENDICE III

- RECOMMANDÉ -

CODE DES MÉTHODES

ET PRATIQUES NAUTIQUES

1985

PARTIE II

RECOMMANDATION SUR LES DIRECTIVES D'EXPLOITATION À L'INTENTION DES OFFICIERS CHARGÉS DU QUART À LA PASSERELLE

VISIBILITE REDUITE

23. Lorsque la visibilité est réduite ou risque d'être réduite, le premier devoir de l'officier de quart est d'observer les dispositions pertinentes des règles pour prévenir les abordages en mer appropriées en veillant notamment à émettre les signaux de brume, à avancer à une vitesse de sécurité et à tenir ses machines prêtes à manoeuvrer immédiatement. Il devrait en outre:
    a) informer le capitaine (voir le paragraphe 24);
    b) prévoir une veille visuelle appropriée, poster un homme de barre et, dans des eaux encombrées, revenir immédiatement à la commande manuelle de l'appareil à gouverner;
    c) montrer les feux de navigation;
    d) faire fonctionner et utiliser le radar.

    Il est important que l'officier de quart connaisse les caractéristiques de manoeuvre de son navire, et notamment sa distance d'arrêt, et qu'il ait conscience du fait que d'autres navires peuvent avoir des caractéristiques de manoeuvre différentes.

ANNEX IV

CHAPTER 1486

CANADA SHIPPING ACT

Small Fishing Vessel Inspection Regulations

REGULATIONS RESPECTING THE CONSTRUCTION AND INSPECTION OF FISHING VESSELS NOT EXCEEDING 24.4 m REGISTERED LENGTH THAT DO NOT EXCEED 150 TONS GROSS TONNAGE

Short Title

1. These Regulations may be cited as the *Small Fishing Vessel Inspection Regulations*

Life Saving Equipment

30. (1) In this section and in section 31, "approved", when used in reference to an article, means that the article has been built in accordance with the standards therefor in the *Life Saving Equipment Regulations* and has been approved by the Board.

(4) Every fishing vessel exceeding 12.2 m in length shall carry

(*a*) one approved lifejacket for each person on board the vessel;

(*b*) two approved lifebuoys, one fitted with 27 m of line and the other with an approved lifebuoy light;

(*c*) in the case of a vessel the keel of which was laid on or after January 6, 1965,

(i) a boat, dory or skiff capable of accommodating not less than four persons,

(ii) an inflatable life raft of sufficient capacity to accommodate

(A) 50 per cent of the persons on board, or

(B) if the vessel makes voyages other than inland voyages and goes beyond the limits of home-trade Class III voyages, 75 per cent of the persons on board, and

(iii) if the equipment required by subparagraphs (i) and (ii) is not capable of accommodating 1 1/2 times the number of persons on board, such additional boats, dories, skiffs or inflatable life rafts as are necessary to provide accommodation in the aggregate for 1 1/2 times the number of persons on board; and

APPENDICE IV

CHAPITRE 1486

LOI SUR LA MARINE MARCHANDE DU CANADA

Règlement sur l'inspection des petits bateaux de pêche

REGLEMENT CONCERNANT LA CONSTRUCTION ET L'INSPECTION DES BATEAUX DE PÊCHE D'UNE LONGUEUR RÉGLEMENTAIRE D'AU PLUS 24,4 m ET D'UNE JAUGE BRUTE D'AU PLUS 150 TONNEAUX

Titre abrégé

1. Le présent règlement peut être cité sous le titre *Règlement sur l'inspection des petits bateaux de pêche*

Équipement de sauvetage

30. (1) Dans le présent article et à l'article 31, l'expression «approuvé», appliquée à un objet, signifie que l'objet a été construit conformément aux normes applicables, établies dans le *Règlement sur l'équipement de sauvetage*, et qu'il a été approuvé par le Bureau.

(4) Tout bateau de pêche d'une longueur de plus de 12,2 m aura

a) un gilet de sauvetage approuvé pour chaque personne à bord;

b) deux bouées de sauvetage approuvées, l'une munie d'une ligne de 27 m et l'autre d'un feu de bouée de sauvetage approuvé; et

c) si sa quille a été posée le 6 janvier 1965, ou après cette date,

(i) une embarcation, un doris ou un esquif pouvant recevoir au moins quatre personnes,

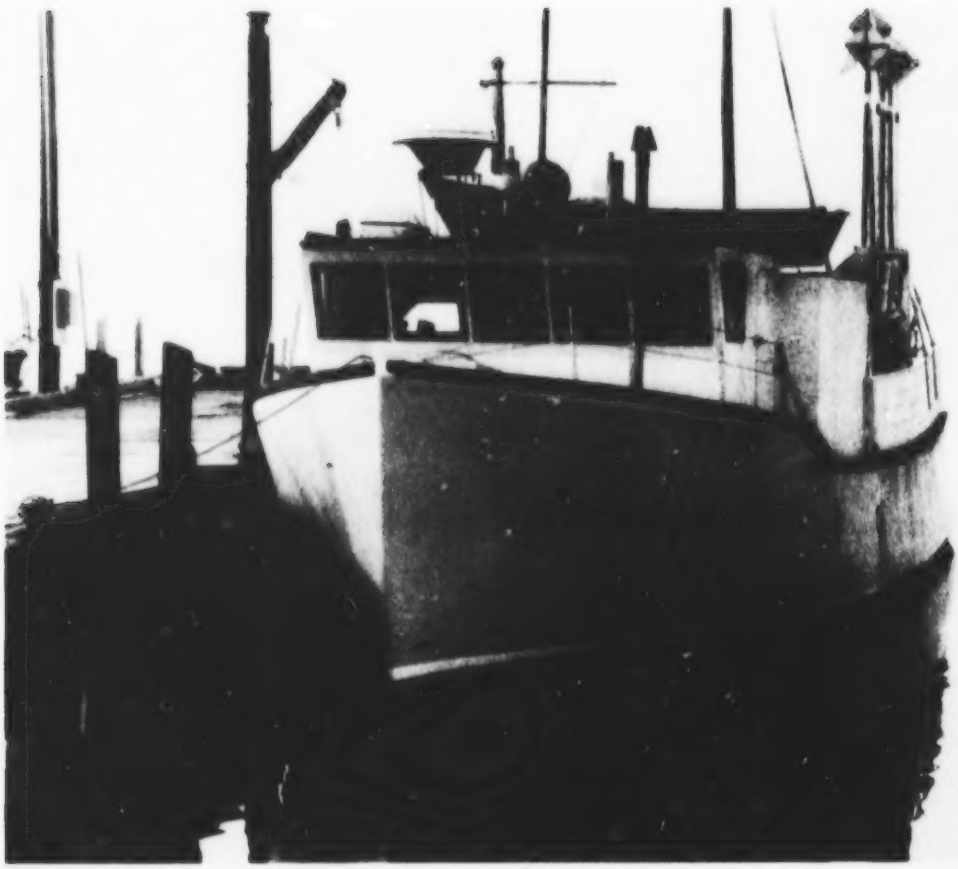
(ii) un radeau de sauvetage pneumatique pouvant recevoir

(A) 50 pour cent du nombre de personnes à bord, ou

(B) s'il effectue des voyages autres que des voyages en eaux intérieures et s'il va au-delà des limites des voyages de cabotage classe III, 75 pour cent du nombre des personnes à bord, et

(iii) si l'équipement prescrit aux sous-alinéas (i) et (ii) ne peut recevoir 1 1/2 fois le nombre de personnes à bord, les embarcations, doris, esquifs ou radeaux de sauvetage pneumatiques supplémentaires nécessaires pour que l'ensemble de l'équipement puisse recevoir 1 1/2 fois le nombre de personnes à bord; et

"AMY IRENE"



Similar cooling system as on "AMY IRENE"

Circuit de réfrigération semblable à celui sur le "AMY IRENE"

This nipple was galvanized steel

Ce raccord était en acier galvanisé

Hydraulic type hose as fitted on "AMY IRENE"

Boyau de type hydraulique tel que monté sur le "AMY IRENE"